

**A-200**

**JET PROPULSION LABORATORY  
SAFETY PRACTICE  
FOR  
ASBESTOS-RELATED WORK OPERATIONS  
  
FOR TIME-AND-MATERIAL  
  
CONTRACTS AT JPL FACILITIES**

## I. GENERAL

- A. It is Laboratory practice to ensure that all personnel, both those performing asbestos-related work operations and those working in surrounding areas, are protected from exposure to airborne asbestos fibers, which may be generated during work operations. In complying with this practice, JPL will meet or exceed regulatory requirements and comply with good work practices established by the asbestos abatement industry.
- B. This safety practice applies to all personnel working in areas where asbestos-containing materials (ACM) or presumed asbestos containing materials (PACM) are present and could be disturbed by the operations they perform.
- C. Due to the recognized human health risks associated with exposure to airborne asbestos fibers, all personnel working on operations where asbestos fibers could be generated shall be certified before commencing operations. JPL Facilities Construction Coordinators (FCC) shall assure that contractors provide records of training and certification to the Safety Operations Section (SOS) prior to commencement of asbestos-related operations by contractor personnel.
- D. All contractors are required to successfully complete at a minimum, a two-hour asbestos awareness-training course and a respiratory protection training and fit-testing course. Contractors must submit records of equivalent training, and fit testing and certification to the Safety Operations Section (SOS) for approval.

## II. DEFINITIONS

- A. Asbestos: A group of naturally occurring materials including chrysotile, crocidolite, and amosite, which present a severe health hazard and require compliance with strict regulatory requirements to ensure that there is no exposure to personnel or any environmental release.
- B. Asbestos-Related Work: A maintenance or construction activity during which an employee will likely contact ACM or PACM and may include Class I, II, III, or IV asbestos activities.
- C. Class I asbestos work: Activities involving the removal of Thermal System Insulation (TSI) and surfacing ACM and PACM.
- D. Class II asbestos work: Activities involving the removal of ACM, which is not TSI, or surfacing material. This includes, but is not limited to AC wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
- E. Class III asbestos work: Repair and maintenance operations where ACM including TSI and surfacing ACM and PACM is likely to be disturbed.
- F. Class IV asbestos work: Maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities. Removing ceiling panels where spray-applied asbestos-containing material is present is considered at a minimum, Class IV asbestos work.
- G. Encapsulant: A substance applied to ACM to control the release of airborne asbestos fibers.
- H. HEPA filter: A filter capable of trapping and retaining at least 99.97 percent of all particles 0.3 micrometers in diameter.
- I. Impervious Garment: Clothing made of material that will not allow entrance or passage of asbestos fibers.
- J. Operations: The process of being engaged in, or connected with, the physical execution or performance of work involving the practical application of a principle or process. The lifting of a single ceiling tile qualifies as an operation and is subject to all applicable requirements.

- K. Permissible Exposure Limit (PEL): The contractor shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an eight hour time-weighted average.
- L. Excursion Limit (EL): The contractor shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air as averaged over a thirty minute sampling period.

### III. REFERENCES

- A. California Code of Regulations, Title 8 (Cal/OSHA), General Industry Safety Orders Section 5208 and Construction Safety Order section 1529.
- B. Cal. Code Regs., Title 8, Sec. 1531, Construction Standard for the Use of Respirators.
- C. Cal. Code Regs., Title 8, Sec. 5144, Respiratory Protection
- D. Cal Code Regs., Title 8, Sec. 3203, Injury and Illness Prevention Program
- E. Code of Federal Regulations, Title 29, Section 1926.58 Asbestos
- F. Code of Fed. Regs., Title 29, Sec. 1910.1001, Warning Labels

### IV. RESPONSIBILITIES

#### A. FACILITIES CONSTRUCTION COORDINATORS

1. Facilities Construction Coordinators (FCC) shall assure that contractors comply with this Safety Practice requiring them to train and certify their employees. The FCC shall inform contractor personnel of the presence of asbestos, ensure they are appropriately trained, and require them to wear the proper protective equipment during asbestos-related work. The FCC shall coordinate all asbestos-related work with the SOS prior to the initiation of operations. Contractors, through the FCC, shall inform the SOS whenever a disturbance to ACM or PACM occurs during the performance of their work.
2. For maintenance or custodial activities which fall under the Class IV asbestos work definition, the FCC shall ensure either through a written work plan or verbal communication with the Contractor that appropriate workpractices which include appropriate protective control measures to minimize exposure and contamination will be in place. The FCC shall confirm appropriate work practices and procedures with the SOS as needed.
3. For all asbestos- related work considered Class I, II, or III, a specific written work plan (WWP) shall be submitted from the contractor to the FCC. The FCC shall then provide a copy with the Construction Work Order (CWO) to the SOS for sign-off. The specific WWP shall describe at a minimum:
  - A physical description of the work area;
  - A description of the approximate amount of material to be removed;
  - A schedule for turning off and sealing existing ventilation systems;
  - Personnel hygiene procedures;
  - A description of personal protective equipment and clothing to be worn by employees; to be tested;
  - A description of work practices to be observed by employees; and
  - An air monitoring plan
4. Copies of all monitoring documentation including personal, area, and clearance shall be provided to the FCC within 48 hours.

**B. SAFETY OPERATIONS SECTION**

The SOS shall review and approve all WWP for asbestos-related operations (Class I, II, or III) prior to the initiation of work. The SOS will review work plans associated with Class IV asbestos related work as well at the discretion of the FCC. The SOS oversees and monitors these operations to assure compliance with regulatory requirements and Laboratory practices. The SOS will review personnel exposures and recommends and oversees implementation of hazard control measures and procedures. The SOS investigates disturbances to ACM and PACM during the performance of asbestos-related work and recommends appropriate corrective measures to the FCC. If a disturbance should occur, the SOS shall oversee clearance of these areas.

**V. PROCEDURES****A. INITIATION OF OPERATIONS**

1. Prior to the commencement of asbestos-related work involving Class I, II, or III asbestos work, a WWP and CWO shall be provided to the SOS by the FCC for safety signature.
2. As necessary, the SOS representatives will evaluate the operation for compliance with all government regulations, assess personnel exposure where appropriate, and determine the adequacy of hazard control measurements that will be required.
3. The SOS shall document the results of the findings and maintain a file copy.
4. All asbestos-related work for time and material contracts will be performed by a JPL-SOS approved asbestos contractor.
5. When disturbed ACM or PACM is discovered, work shall be halted and the SOS shall be contacted through the FCC to determine next course of action.

**B. TRAINING**

1. A minimum of asbestos awareness training for all contractor personnel shall take place prior to working in an area with asbestos containing material. The training shall be documented. Training shall include, but not be limited to instruction in applicable policies and safety practices and procedures for the level and type of work to be conducted. In addition to initial training prior to work, personnel are required to attend annual refresher training.
2. Contractor companies shall train their employees in accordance with the regulations in III, above as required by their scope of work and their contract with the Laboratory.

**C. RESPIRATOR USE, FIT-TESTING AND TRAINING**

1. Respiratory protection shall be used when an employee's exposure level exceeds the PEL or EL as prescribed in III, while performing Class I, II, or III activities, when conducting work where there is potential to disturb ACM or PACM, or when entering regulated areas where respirators are required. JPL assumes that persons conducting asbestos-related work will require the use of respiratory protective equipment. NIOSH-approved half-mask air-purifying respirators with HEPA filters shall be considered the minimum acceptable protection.
2. The contractor is responsible for medical authorization and respiratory protection training as required, for their employees to wear respiratory protective equipment. Refer to III above.
3. Contractor companies shall provide fit-testing for their employees as mandated by III.C., above, and their contracts with the Laboratory. Respirator fit testing and training records and dates of medical authorizations, as applicable, shall be made available to the SOS upon request.

D. MEDICAL SURVEILLANCE

The contractor shall institute a program of medical surveillance for employees in compliance with 8 CCR 1529 (m). Records shall be made available to the SOS upon request.

E. MINIMUM AREA CONTROL AND CONTAINMENT MEASURES FOR CLASS IV ACTIVITIES

1. Asbestos-related work shall be conducted in uninhabited areas on weekends and during the evenings on weekdays, unless otherwise approved by the SOS representatives.
2. A HEPA vacuum shall be available at the worksite in the event of inadvertent dislodging or disturbance of ACM or PACM.
3. As necessary, a spray bottle with water-cut penetrating encapsulation or a spray adhesive must be used to arrest any fibrous materials on the back of the ceiling tile.
4. Impervious, protective garments must be worn during work operations and properly disposed of at the end of each operation. Workers cannot travel between worksites without decontaminating and then removing protective garments. Contractors shall supply such garments to their personnel.
5. Impervious drop cloths and other measures as needed shall be used to protect the work area from contamination during asbestos related work.
6. When ACM or PACM is inadvertently disturbed, work shall be halted and the SOS shall be contracted through the FCC to determine the next course of action.

**VIOLATIONS OF ACCEPTABLE WORK PRACTICES WILL RESULT IN IMMEDIATE CESSATION OF THE OPERATION UNTIL THE SOS CAN VERIFY THAT REQUIRED CORRECTIVE ACTIONS HAVE BEEN SUCCESSFULLY IMPLEMENTED.**